



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,742	03/31/2006	Toru Matsuki	016778-0501	2127
23428 7590 01/22/2009 FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007				
EXAMINER				
CASCA, FRED A				
ART UNIT		PAPER NUMBER		
2617				
MAIL DATE		DELIVERY MODE		
01/22/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/552,742

Applicant(s)

MATSUKI, TORU

Examiner

FRED A. CASCA

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is in response to applicant's amendment filed on October 30, 2008. Claims 1-6 are still pending in the present application. **This Action is made FINAL.**

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al (US 2006/0094432 A1) in view of Leonard (US 2006/0068826 A1).

Referring to claim 1, Chang discloses a method for testing a handover function between cells covered by the base station radio apparatuses in a mobile communication system (abstract and Fig. 1), the mobile communication system at the least including a mobile station (Fig. 1), base station radio apparatuses that perform communication with the mobile station and a radio base station control apparatus that controls transmission powers for the base station radio apparatuses (Fig. 1), wherein the method comprising:

a step of calculating a difference between levels of reception fields for the base station radio apparatuses that cover the cells for which the handover test of the mobile terminal is to be performed (Paragraph 16 and 38, "measuring signal strength of signals received by a mobile station from an active base station and comparing the measured signal strength of the active base

station with a first threshold value”); the difference between the levels of the reception fields of which is equal to or smaller than the threshold value (Par. 37, “compares the measured signal strength power $P(A)$ of the active base station with a plurality of threshold values”) and a step of performing the handover function test between the cells covered by the base station radio apparatuses (Par. 22, 37, “determining if the mobile station needs to hand off to another base station”).

Chang does not specifically disclose controlling transmission powers of the base station radio apparatuses so that a difference is equal to or smaller than a predetermined threshold value in the format claimed.

Leonard discloses a wireless network service using an initial threshold to determine whether a signal received from a cellular device is of sufficient strength to warrant further processing, implementing a power controller of a base station, where the power controller includes an outer loop power control and an inner loop power control, and a outer loop power control determining the strength of the received signal and comparing it to an different threshold values (abstract and paragraphs 8-9, 24 and 27, “wireless network service utilizes an initial threshold to determine whether a signal received from a cellular device is of sufficient strength”, “a power controller of a base station, where the power controller includes an outer loop power control and an inner loop power control”, “ The outer loop power control determines the strength of the received signal and compares it to an initial threshold”).

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the method of Chang by incorporating the teachings of Leonard in the format claimed, for the purpose of providing an efficient handover method.

Referring to claim 2, the combination of Chang/Leonard discloses a method according to claim 1, and further disclose at the step of controlling transmission powers, the transmission power of the base station radio apparatus for which the difference has been calculated and for which the level of the reception field is high is controlled, so that the difference is equal to or smaller than the predetermined value (Leonard, paragraphs 8-9, 24 and 27).

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the method of Chang by incorporating the teachings of Leonard in the format claimed, for the purpose of providing an efficient handover method.

Referring to claim 3, the combination of Chang/Leonard disclose a method according to claim 1 or 2, wherein the method further comprises a step of measuring reception field levels of the mobile terminal (inherent); a step of notifying the radio base station control apparatus of the measured reception field levels (inherent); a step of calculating a difference between the reception field levels that are notified (Leonard, paragraphs 8-9, 24 and 27, Chang, paragraphs 16, 22 and 26); a step of comparing a difference in the thus calculated reception field levels with the threshold value; a step of, when the difference is greater than the threshold value, calculating an adjusted value to control transmission powers of the base station radio apparatuses, so that the difference is equal to or smaller than a predetermined threshold value; and a step of employing

the adjusted value to control the transmission powers of the base station radio apparatuses (Leonard, paragraphs 8-9, 24 and 27, Chang, paragraphs 16, 22 and 26).

Referring to claims 4 and 5, claims 4 and 5 recite features analogous to the features of claims 1 and 2 (as rejected above). Thus the combination of Chang/Leonard discloses all elements of claims 4 and 5 (please see the rejection of claims 1 and 2 above).

Referring to claim 6, claim 6 recites features analogous to the features of claim 1 (as rejected above). Thus the combination of Chang/Leonard discloses all elements of claim 6 (please see the rejection of claim 1).

Response to Arguments

4. Applicant's arguments with respect to claims 1-6 have been considered but they are not persuasive.

In response to applicant's arguments that Chang does not disclose "calculating a difference between levels of reception fields for the base station radio apparatuses that cover the cells for which the handover test of the mobile terminal is to be performed," the examiner respectfully disagrees. A person of ordinary skill in the art would know that the term "levels of reception fields" in the claims corresponds to the *levels of electromagnetic fields*, which corresponds to the "strength of the radio signals" that are made up electromagnetic fields (see Chang, paragraph 16). Further, Chang's comparing of the signal strengths from each base station to a threshold value provides a set of signal strength values for each base station which corresponds to the calculation of the difference between measures of signal strength from each base station.

In response to arguments with respect to claim 3 that "step of measuring reception field levels of the mobile terminal" is not inherent, the examiner respectfully disagrees. First, note that Chang clearly teaches "measuring signal strength" (see Chang, Par. 16, line 3). Second, a person of ordinary skill in the art would know that the term "reception field levels" in the claim 3

corresponds to the *levels of electromagnetic fields*, which corresponds to the “strength level of the radio signals”. Finally, Chang literally states “measuring signal strength” on line 3 of paragraph 16, which corresponds to the “step of measuring reception field levels.”

Conclusion

5. **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred A. Casca whose telephone number is (571) 272-7918. The examiner can normally be reached on Monday through Friday from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Harper, can be reached at (571) 272-7605. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Art Unit: 2617

/VINCENT P. HARPER/

Supervisory Patent Examiner, Art Unit 2617